

KOPANEVICH, P.P.

"Dancing" and swarming of honeybees. Priroda 52 no.8:102-103
Ag '62. (MIRA 16:9)

1. Moskovskaya veterinarnaya akademiya.
(Bees)

KOPANEVICH, P.P.

Antibiotics and bees. Priroda 53 no. 11:67-70 '64. (MIRA 19:1)

1. Moskovskaya veterinarnaya akademiya.

KOPANWICH, YE. G.

23282 Dopusi Na Izgotovleniye Detaley Iz Plastmass I Pressformy Dlya Ikh
Pressovaniya. Trudy Mosk. Aviats. Tekhnol. In-ta, Vyp. 6, 1949,
c. 49-66.

SO: LETOPIS' NO. 31, 1949

KOPANEVICH, E. G.

Osnovy konstruirovaniia plastmassovykh detalei i pressform. Moskva, Mashgiz, 1950. 164 p.

(Fundamentals of designing plastic machine parts and pressmolds.)

SO: Manufacturing and Mechanical Engineering in the Soviet Union,
Library of Congress, 1953.

KOPANEVICH, E. G.

Konstrukce soucasti z plastickych latex a lisovacich forem. (Vyd. 1.)
Praha, Prumyslove vydavatelstvi. 1952. 152 p. (Kniznice kovorumyslu,
sv. 110) (Manufacture of parts made of plastic materials and press
molds. Tr. from the Russian. 1st ed. illus., bibl., footnotes, tables)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 5, no. 12
December 1956

KOPANEVICH, YE. G.

Dies (Metalworking)

Dies with hydro-plastic components. Stan. 1 instr. 23 no. 3:28-29 Mr '52

Monthly List of Russian Accessions, Library of Congress, July 1952. UNCLASSIFIED.

KOPANEVICH, Ye. G.

Machine Tools

Hydroplastic clamps in universal devices, Stan. i instr., 22, No. 4, 1952

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.

KOPANEVICH, YE. G., Eng.

Founding

Method of calculating the outer (shafts) and inner (bore) gage of parts cast in metallic molds. Vest. mash., 72, No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

KOPANEVICH, Ye.G.

[Multiple clamps with hydraulic links in instrument construction]
Mnogokratnye sashiny s gidravlicheskim sven'iami v priborostroenii.
Moskva, Gos. izd-vo obr. promyshl., 1953. 53 p. (MLFA 6:12)
(Hydraulic machinery) (Machine tools)

1. KOPANEVICH, E. G.
2. USSR (600)
4. Machine-Shop Practice
7. Setting up of work in machine-tool fixtures by a flat surface and two openings.
Stan. 1 instr. 24, No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

Tolerances for metric thread elements formed in plastic. Vest.mash. 33
no.3:73-78, 80-82 Mr '53. (MLRA 6:5)
(Screw threads, Standards)

KOPANEVICH, Ye.G.; OSMAS, Ya.V., inzhener, retsentsent; BELYAYEV, V.M.,
inzhener, retsentsent; KORYUSHIN, P.M., inzhener, redaktor;
TIKHONOV, A.Ya., tekhnicheskiy redaktor.

[Designing machine-tool attachments in the instrument industry]
Proektirovaniye stanochnykh prispособlenii v priborostroenii. Mo-
skva, Gos. nauchno-tekhn. issledovaniya mashinostroyeniya. lit-ry, 1954.
231 p. (MLBA 8:2)
(Machine tools)

KOPANEVICH, Ye.G., inzhener.

Wall thickness precision in making hollow parts by die casting.
Lit.proisv.no.7:26-30 J1 '56. (MLRA 9:9)
(Die casting)

KOPANEVICH, Ye. G. (Cand. Tech. Sci.)

"Automation of Drilling Operations in Instrument Manufacture." in book Some Problems in the Modern Technology of Instrument Making, Moscow. Oborongiz, ~~1956~~ 1957 126 p. Moscow. Aviatonnyy tekhnologicheskii institut.

In this article the author discusses automation of drilling operations and suggests the following two ways in which it may be accomplished: 1) building a universal drilling machine with quick resetting for new drilling specifications and 2) developing and introducing special devices for performing automatic drilling operations on ordinary drilling machines. The two methods suggested are discussed in detail. The article contains schematic diagrams of automatic drilling machines. No references are given.

KOPANEVICH, Ye.G.
KOPANEVICH, Ye.G., kandidat tekhnicheskikh nauk.

Introducing automatic control of drilling operations in instrument
manufacturing plants. Trudy MATI no.33:97-100 '57. (MIRA 10:10)
(Drilling and boring machinery) (Automatic control)

25(1)

PHASE I BOOK EXPLOITATION

SOV/2690

Kopanevich, Yevgeniy Grigor'yevich, Candidate of Technical Sciences

Tochnost' detaley, izgotovlyayemykh v metallicheskih formakh
(Precision of Parts Made in Metal Molds) Moscow, Mashgiz, 1958.
201 p. 3,000 copies printed.

Reviewer: Z. F. Urazayev, Engineer; Ed.: Yu. A. Vorob'yev, Engineer; Tech. Ed.: V. D. El'kind; Managing Ed. for Literature on Machinery and Instrument Construction: N. V. Pokrovskiy, Engineer.

PURPOSE: This book is intended for designers, technologists, foremen, and production workers in the instrument-and machinery-construction industries. It may also be used by students of correspondence vuzes and tekhnikums.

COVERAGE: The author analyzes errors causing spread of dimensions in parts manufactured by die casting, investment casting, die forging, and powder metallurgy methods, as well as spread in parts made in plastic molds. Classifications of dimensions according to factors causing spread are presented along with corresponding formulas, graphs, and tables for calculating tolerances for castings.
Card 1/8

Precision of Parts (Cont.)

SOV/2690

Also discussed are ways of improving casting precision and examples for determining tolerances and dimensions for molding. No personalities are mentioned. There are 22 references, all Soviet.

TABLE OF CONTENTS:

Introduction	3
Ch. I. Dimensional Accuracy of Male and Female Elements of Parts (Dimensions of the First Group)	7
Classification of dimensions of male and female elements	7
Spread of dimensions conditioned by variation of calculated shrinkage	9
Spread of dimensions dependent on the accuracy of forming elements	34
Spread of dimensions caused by worn forming elements	36

Card 2/8

Precision of Parts (Cont.)

SOV/2690

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000824510002-9

Natural spread of dimensions measured in a direction normal to the direction of the removal of part from mold when tapers are not included in tolerances (dimensions of the first subgroup) 38

Method of determining nominal dimensions of mold cavities and cores measured in a direction normal to the direction of removal 45

Analysis of bilateral tolerances of male and female elements 55

Practical determination of nominal dimensions of mold cavities and cores in the case of unilateral tolerances 58

Compensating errors dependent on the accuracy of the molding elements and their wear by modification of the range of variations in the calculated shrinkage 66

Natural spread of dimensions measured in a direction normal to the direction of the removal of part from mold when tapers are included in tolerances (dimensions of the second subgroup) 70

Natural spread of dimensions of female elements measured in a
Card 3/8

Precision of Parts (Cont.)

SOV/2690

direction of the removal of part from mold (dimensions of the third subgroup)	72
Determining nominal height of cores and depth of cavities when the dimensions are not measured from the parting-line surface	73
Natural spread of dimensions of male elements, dependent on flash thickness (dimensions of the fourth subgroup)	75
Natural spread of dimensions of wall thicknesses measured in a direction normal to the direction of the removal of part from mold (dimensions of the fifth subgroup)	88
Determining nominal dimensions of diameters of core and cavity, between which the wall of the casting is formed	90
Distribution of the natural spread of dimensions relative to the nominal wall thickness	91
Natural spread of dimensions of wall thicknesses measured in the direction of the removal of part from mold (dimensions of the sixth subgroup)	92
Determining nominal depth of cavity and height of core, between which the wall of the casting is formed	92

Card 4/8

Precision of Parts (Cont.)

SOV/2690

Ch. II. Accuracy of Dimensions Determining the Location of the Axes of Cast Elements. (Dimensions of the Second Group)	94
Classification of dimensions of the second group	94
Analysis of factors causing spread of dimensions of the second group	100
Methods of calculating natural spread of dimensions of the second group	105
Analysis of the natural spread of dimensions which determine the location of the axes of the cast elements, and measures for improving accuracy	116
Determining nominal dimensions coordinating the location of the axes of molding or fixing elements	119
Ch. III. Accuracy of Elements With Metric Thread Formed by Casting and Molding	129

Card 5/8

Precision of Parts (Cont.)	SOV/2690	
Spread of dimensions of the average thread diameter		129
Analysis of the natural spread of dimensions of the average thread diameter of parts formed by die casting		140
Natural spread of dimensions of the average thread diameter of parts formed in plastic molds		142
Natural spread of dimensions of the internal nut diameter and external bolt diameter of cast thread		145
Determining nominal dimensions of the thread elements of mold cores and rings		150
Ch. IV. Accuracy of Parts Formed by Investment Casting		160
Natural spread of dimensions of male and female elements of parts formed by investment casting		160
Method of determining the natural spread of dimensions of male and female elements		164
Card 6/8		

Precision of Parts (Cont.)

SOV/2690

Analysis of the natural spread of dimensions of male and female castings	167
Determining nominal dimensions of cavities and cores	169
Accuracy of dimensions which determine the location of axes of castings formed by investment casting	173
Ch. V. Accuracy of Parts Manufactured by Powder Metallurgy Methods	179
Factors causing spread of dimensions of parts made from powdered metals	179
Natural spread of dimensions	182
Determining nominal dimensions of cores and cavities for pressing and calibrating parts	187
Nominal dimensions which determine the location of axes of cores and cavities	190
Card 7/8	

MALOV, Aleksey Nikolayevich; KOPANEVICH, Ye.G., kand.tekhn.nauk, retsenzent;
SHUKHTER, V.Ya., kand.tekhn.nauk, red.; BELYAYEVA, L.A., izdatel'skiy
red.; ROZHIN, V.P., tekhn.red.

[Technology of cold pressing and forging] Tekhnologiya kholodnoi
shtampovki. Izd. 2-oe, perer. Moskva, Gos. izd-vo obor. promyshl.,
1958. 374 p. (MIRA 11:5)
(Sheet-metal work) (Forging)

KOPANEVICH, Ye.G.

None given
 A Conference on the Accuracy of Machine Building Castings
 Investiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 4, pp 235-250 (USSR)
 A conference on the above subject took place in the Institute of Machine Building of the Academy of Sciences of the USSR on 22-23 April 1959. About 200 representatives of scientific-research institutes, laboratories, universities and largest works from 34 towns participated in the conference. The following papers were read:
 B.B. Gulvayev "The present state of studies of the accuracy of castings"; P.N. Alisov "Tasks of investigations of the dependence of the accuracy of castings on technological factors"; N.F. Beriz "Methods of analytical evaluation of the accuracy of castings"; Yu.A. Vorob'ev "Theoretical aspects of the accuracy of castings"; I.P. Yezorubov "The system of allowances for mechanical working of castings"; V.G. Kopenevich "Methods for the determination of tolerances for dimensions of cast parts"; S.A. Karent "Tolerances for non-ferrous castings produced by various methods of casting"; G.N. Nikolskiy "Methods of controlling the cleanliness of the surface of castings"; I.S. Konstantinov "The influence of stresses formed during casting on the accuracy of castings"; L.Ye. Kozlov "The process of jacking moulds as a factor determining the accuracy of casting"; A.S. Kabanov "The influence of the dimensions of castings caused by specific features of operation of the pattern-mould boxes equipment"; A.N. Embravitskiy "Typical deformations of casting moulds"; V.G. Kozlov "Conditions of making accurate castings in sand moulds"; M.E. Ivancev "The influence of the chemical composition of iron on the accuracy of dimensions of castings"; S.S. Pecherko and D.B. Kuznetsov "Improvement in the accuracy of castings made in pressed shell moulds"; A.V. Kozlov "Experience in increasing the cleanliness and accuracy of first castings"; I.I. Zolotarev "The lost wax method of casting"; I.I. Zolotarev "The lost wax method"; I.I. Zolotarev "An investigation of the accuracy and surface cleanliness of castings made under pressure and by the lost wax method"; M.M. Makhitavskiy and B. N. Kulimov "The formation of the contour of castings during casting under pressure"; K.G. Kozlov, A.A. Kozlov and B. N. Kulimov "An improvement in the surface quality of castings made under pressure by forming a vacuum in the pressure moulds". It was established that studies on the subject of the accuracy of castings are developing rapidly and that the scientific community is making considerable research work and sufficient numbers of specialists in the field of mathematics, physics and electronics. In order to develop methods for overall calculations of the accuracy, productivity and economics of casting processes the conference recommended organizing in Moscow, Leningrad and Aliev (at scientific research institutes and universities) mixed teams consisting of foundry specialists, mathematicians, physicists and economists.

PHASE I BOOK EXPLOITATION

80V/5304

Soveshchaniye po teorii litseynykh protsessov. 5th, 1959
 Technost' otivok; trudy soveshchaniya (Accuracy of Castings; Transactions of the Fifth Conference on the Theory of Founding Processes) Moscow, Naukaiz, 1960. 206 p. 3,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinostroyeniya. Komissiya po tekhnologii mashinostroyeniya.

Ed. (title page): B. B. Gulyayev, Doctor of Technical Sciences, Professor; Ed. of Publishing House: O. M. Soboleva, Tech. Ed.: A. P. Uvarova; Managing Ed. for Literature on Hot-Processed Metals: G. Ya. Golovin, Engineer.

PURPOSE: This book is intended for scientific and technical personnel at scientific research institutes, factories, and schools of higher education.

COVERAGE: The book contains 19 reports read at a conference on the accuracy of castings. The conference was organized by the Committee on Processing in Machine Building and sponsored by the Institut mashinostroyeniya AN SSSR (Institute of the Science of Machines of the Academy of Sciences USSR). The reports, presented by leading specialists, scientists, workers, and production personnel, discuss the present state of the problem of the accuracy of castings and methods of solving the problems involved. There are 58 references, mostly Soviet.

Yegorenkov, I. P. [Candidate of Technical Sciences]. System of Allowances for the Machining of Castings. 54

Konstantinov, Ya. G. [Candidates of Technical Sciences]. Dimensional Tolerances of Cast Parts. 62

Karenkov, S. A. [Candidate of Technical Sciences]. Tolerances of Nonferrous-Alloy Castings Made by Various Methods. 67

Ivanov, M. P. [Engineer]. Investigating the Effect of Variation in the Chemical Composition of Cast Iron on Shrinkage and Dimensional Accuracy of Castings. 80

The work was carried out under the general supervision of P. I. Berg.

Nikolskiy, O. M. [Engineer]. Classification, Conventional Symbols, and Methods of Determining the Roughness of Cast Surfaces. 87

Tokovlev, V. O. [Candidate of Technical Sciences]. Conditions for Increasing the Accuracy of Castings Obtained in Sand Molding. 99

The experimental part of the work was carried out under the supervision and direct participation of Engineer Z. I. Rudantseva.

Card 3/7

KOPANEVICH, Ye.G. kand.tekhn.nauk, dots.

Determining the economic efficiency of using specializer equipment.
Trudy MATI no.47:5-16 '60. (MIRA 14:2)
(Factory management)

KOPANEVICH, Ye.G., kand.tekhn.nauk, dotsent

Accuracy of dimensions determining axes of holes drilled in jigs.
Trudy MATI no.52:5-19 '61. (MIRA 15:4)
(Drilling and boring)

BELEVTSSEV, A.T., kand. tekhn. nauk; GOLIKOV, V.I., kand. tekhn. nauk;
GOTSERIDZE, R.M., inzh.; YEFIMOV, V.P., kand. tekhn. nauk
[deceased]; KOPANEVICH, Ye.G., kand. tekhn. nauk; MALOV, A.N.,
prof.; PARFENOV, O.D., kand. tekhn. nauk; ROZENBERG, A.G.,
tekhn.; SEMIBRATOV, M.N., kand. tekhn. nauk; SKURATOV, A.Ye.,
kand. tekhn. nauk; SOKOLOVSKIY, I.A., kand. tekhn. nauk;
SYROVATCHENKO, P.V., kand. tekhn. nauk; TISHCHENKO, O.F., doktor
tekhn. nauk; USHAKOV, N.N., kand. tekhn. nauk; CHUMAKOV, V.P.,
kand. tekhn. nauk; SHAL'NOV, V.A., kand. tekhn. nauk; SHISHKIN,
V.A., kand. tekhn. nauk; YUZHNYI, I.I., inzh.; BLAGOSKLONOVA,
N.Yu., red. izd-va; SOKOLOVA, T.F., tekhn. red.

[Manual for engineers in the instrument industry] Spravochnik
tekhnologa-priborostroitelia. Pod red. A.N. Malova. Moskva,
Mashgiz, 1962. 988 p. (MIRA 16:2)
(Instrument manufacture)

VOROB'YEV, Yu.A., kand. tekhn. nauk; KOPANEVICH, Ye.G., kand. tekhn. nauk, red.; SIROTIN, A.I., inzh., red. ~~iss-va~~, GORDEYEVA, L.P., tekhn. red.

[Accuracy of parts obtained from nonferrous alloys and plastics by casting and pressing] Tochmost' detalei, polucheniemykh lit'em i pressovaniem iz tsvetnykh splavov i plastmass. Moskva, Mashgiz, 1963. 173 p. (MIRA 16:6)
(Metalwork) (Plastics--Molding)

KOPANEVICH, Ya.G., kand. tekhn. nauk; VOROB'YEV, Yu.A., kand.
tekhn. nauk, red.; SIROTIN, A.I., red. izd-va; EL'KIND,
V.D., tekhn. red.

[Precision in preparing billets] Tochnost' izgotovleniia sa-
gotovok. Moskva, Mashgis, 1963. 363 p. (MIRA 16:7)
(Metalwork)

KOPANICA, M.

✓ Polarographic determination of vanadium. R. Fridl and
CH M. Kopanica (Karlova Univ., Prague). Sborník 1. Československé konf. Anal. Chem. Prague, 1957, 7, 8.
(Pub. 1957) - Ethylenediaminetetraacetate

heavy metals complexed with β -cyclodextrin in aqueous solution.

reduction proceeds in 2 distinct steps $V(V) \rightarrow V(IV) \rightarrow V(III)$
at $E = +1.25$ and $+1.55$ V. Addition of 1.1 g of sodium

Pb-borate-II complexes. The use of $\text{Pb}(\text{OAc})_2$ and $\text{Pb}(\text{NO}_3)_2$ as starting materials, with the acid (III) formed in situ, gave the same results.

KOPANICA, MILOSLAV

Cham Rapid analytical methods for metals and minerals. I.
Oxidimetric determination of cobalt in solutions of glycine.
 Miloslav Kopanica and Jan Dolezal (Vysoká škola
 chemická, Praha, Czechoslovakia)
 Co can be detd. by direct potentiometric titration with
 $K_2[Fe(CN)_6]$ in the presence of a redox indicator at
 pH 9.5-12. The reaction is rapid and quantitative
 stable under excess of air. From metal ions
 Mn^{2+} , Cr^{3+} , W^{6+} , As^{3+} , Cu^{2+} , Zn^{2+} , Al^{3+} , Ag^+ ,
 Pb^{2+} , Ba^{2+} , and NH_4^+ do not interfere, neither do
 NO_3^- , SO_4^{2-} , and F^- . Interfering influence of Mn^{2+} and
 Fe is removed by selective oxidation of Mn^{2+} to MnO_2
 medium and by addition of alkali to the solution of $K_2[Fe(CN)_6]$
 which prevents the formation of $Fe(OH)_3$ and $Fe_3(OH)_8$
 complex-forming compounds. The Co^{2+} concentration can be
 detd. must be carried out in an inert atm. The method was
 successfully applied in the analysis of Niobite, Bismuthite
 and minerals

KOPANICA, M.; DOLEZAL, J.

"A rapid analytic method for determining metals and inorganic raw materials.
I. Oxidimetric determination of cobalt in a glycine medium. In German."

p. 195 (COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS. SBORNIK
CHECKHOSLOVATSKIKH KHMICHESKIKH RABOT. --Praha, Czechoslovakia.)
Vol. 22, No. 1, Feb. 1957

SO: Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 5, May 1958

KOPANICA, MILOSLAV ~~XXXXXXXXXX~~

CZECHOSLOVAKIA / Analytical Chemistry. Analysis of
Inorganic Substances.

E-2

Abstr Jour : Ref Zhur - Khim., No 10, 1958, No 32166

Author : IV: Miloslav Kopanica, Jan Dolozal; V: Jan Dolozal.

Inst : -

Title : Application of Amino Compounds to Polarography of Inorganic
Substances. IV. Polarographic Behavior of Zinc, Cobalt and
Nickel in Glycine Solutions. V. Simultaneous Determination
of Thallium, Copper, Lead and Cadmium in Indium.

Orig Pub : Chem. listy, 1957, 51, No 6, 1052-1057; 1058-;060; Col-
lect. czechosl. chem. commun., 1958, 23, No 1, 50-56; No 2,
253-256.

IV. Zn^{2+} in the medium of the Britton-Robinson buffer
solution of pH = 7.3 is reduced at -0.04 v. This wave is
suppressed, if glycine was added, and a new wave appears si-
multaneously, which is shifted about 200 mv to the side of

Card 1/4

3

CZECHOSLOVAKIA / Analytical Chemistry. Analysis of
Inorganic Substances.

E-2

Abstr Jour : Ref Zhur - Khim., No 10, 1958, No 32166

negative values. The sum of heights of both these waves remains constant. A similar decrease of height of the 1st wave is observed also at the rise of pH, if the constant of analytic concentration was preserved. The authors suppose that the 1st wave corresponds to the reduction of the simple Zn^{2+} ion plus the reduction of a MG^{+} ion (in which M is a metal and G is the glycine group). If the glycine concentration was sufficient, the height of the 1st wave is determined by the rate of the reaction $MG_2 + H^+ \rightarrow MG^+ + HG$; the rate constant of this reaction $\log C_1 = 5.0$. The 2nd wave corresponds to the reduction of MG_2 . All that has been said in reference to Zn is valid also in reference to Co; in this case $\log C_1 = 7.4$. In the case of Ni, a decrease of the height of the 2nd wave of MG_2 and the formation of a 3rd wave is observed; the 3rd wave grows in the shape of a

Card 2/4

KOPANICA, M.; DOLEZAL, J.

SCIENCE

Periodical COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS. SBORNIK CHEKHOSLOVATSKIKH
KHMICHESKIKH RABOT. Vol. 23, no. 1, Jan. 1958.

KOPANICA, M.; DOLEZAL, J. Use of amines in inorganic polarography. IV. Polarographic
behavior of zinc, cobalt, and nickel in glycine solutions. In German. p. 50.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 3, March, 1959. Uncl.

KOPANICA, M.

Chelometric titration of manganese in ferro-manganese. R. Pribil and M. Kopanica (Czechoslovak Acad. Sci., Prague). *Chemical Abstracts* 48, 85-8 (1959).—Mn in ferro-manganese (I) is detd. by an EDTA titration by dissolving about 0.25 g. of the alloy in concd. HNO_3 and then concd. HCl , evapn. to a small vol., further addn. of the acids and a repetition of the evapn.; dilm. to 250 ml. with H_2O . A 25- or 50-ml. aliquot of the soln., without bothering to remove pptd. silica, is placed in a 300-ml. conical flask and 5 ml. of 10% aq. hydroxylamine-HCl soln. is added. Ten ml. of 20% triethanolamine soln. and 20-35 ml. of concd. NH_3 are added.

The mixt. is dild. to 150 ml. Indicator powder, consisting of a mixt. of 1 part of thymolphthalexon with 100 parts of KNO_3 is added to obtain a clear blue color. The soln. is titrated with standard 0.05M EDTA to a colorless or slight pink color. The procedure is only applicable to I contg. 40% Mn. Cu and Zn do not interfere in trace amts.; higher amts. can be masked by the addn. of 50 mg. of KCN. Cu can be detd. photometrically in an aliquot of the final soln. by the use of Na diethyldithiocarbamate by the procedure of Sedivec and Vasak (*C.A.* 44, 10574e). Bernard M. Blank

KOPANICA, M.; PRIBIL, R.

Application of complexones in chemical analysis. LIV. Polarographic determination of cadmium in metallic indium. Coll Cz chem 26 no.2: 398-402 F '61. (EEAI 10:9)

1. Laboratory of Analytical Chemistry, Institute of Geochemistry and Raw Material Research, Czechoslovak Academy of Science, Prague.

(Complexons) (Cadmium) (Indium)
(Polarograph and polarography)

KOPANICA, M.; VYDRA, F.

Indirect amperometric cobalt determination. Coll ~~Cz~~ Chem 28 no.1:
262-264 Ja '63

1. Polarographisches Institut, Tschechoslowakische Akademie der
Wissenschaften, Prag.

CONRADI, G.; KOPANICA, M.

Polarographic examination of the complex-forming properties of the triethylenetetramine-N,N,N',N'',N''', N'''-hexaacetic acid. Coll Cz Chem 28 no.6:1600-1603 Je '63.

1. Analytisches Laboratorium, Polarographisches Institut, Tschechoslowakische Akademie der Wissenschaften, Prag.

KOPANICA, Miloslav

Displacement reactions of complex compounds and their use in polarographic analysis. Chem listy 58 no. 2:163-176 F '64.

1. Laborator analytické chemie, Polarografický ústav, Československá akademie věd, Praha.

KOPANICA, Miloslav, RNDr. CSc.; CONRADI, Gunter, dipl. chem.

Triethylenetetramine N, N, N', N'', N''', N''''-hexaacetic acid and its use in polarographic analysis. Rudy 12 no.6:202-203 Je '64.

1. Analytic Laboratory of the Institute of Polarography, Czechoslovak Academy of Sciences (for Kopanica). 2. Institute of Inorganic Chemistry, Karl Marx University, Leipzig, German Democratic Republic (for Conradi).

CONRADI, G.; KOPANICA, M.

Effect of surface-active substances on the polarographic behavior
of triethylene-tetramine-N,N,N',N'',N''',N''''-hexaacetic acid complexes.
Coll Cz chem 29 no.8:1952-1956 Ag '64.

1. Polarographisches Institut, Tschechoslowakische Akademie der
Wissenschaften, Prague.

~~KOPANITSA~~, M. [~~Kopanica~~, M.]; KONRADI, G. [~~Conradi~~, G.]; PRSHIEIL, R.
[Pribil, R.]

Polarographic determination of impurities in indium concentrates.
Zav. lab. 30 no.10:1181-1183 '64. (MIRA 18:4)

1. Polyarograficheskiy institut AN Chekhoslovatskoy Sotsialisticheskoy
Respubliki, Praga.

L 52760-65 SMT(1)/ENG(v)/FCC/EEC(t) Pe-5/Pi-4 CN/GS

ACCESSION NR: AT5011164 UR/0000/64/000/000/0108/0113

AUTHOR: Ivanov, A. P.; Kopanik, Ye. K.; Prishivalko, A. P.; Predko, K. G.

TITLE: Investigation of the indicatrix of scattering of light by large absorbing particles of irregular form

SOURCE: Mezhyvedomstvennoye soveshchaniye po aktinometrii i optike atmosfery. 5th, 1964. Aktsionnaya i optika atmosfery (Atmospheric optics and optically active substances) study soveshchaniya. Moscow, Izd-vo Nauka, 1964, 192-193.

TOPIC TAGS: atmospheric optics, light scattering, atmospheric absorption, atmospheric physics, aerosol, particle shape, scattering indicatrix

ABSTRACT: This paper is a continuation of investigations begun by Ye. O. Fedorova (Zh. fiz. i mat. nauk, 1957, 25, No. 151). It presents an experimental study of the indicatrix of scattering of light by individual, large, slightly absorbing particles of irregular form. The paper discusses the results of the experimental study of the indicatrix of scattering of light by spherical, slightly absorbing particles. The experimental data. The particles of investigated matter successively entered the beam. Upon passing through the beam the particle scatters light in all directions.

Card 1/3

scattering by particles of regular and irregular form is essentially different. For this reason, it is impossible to model particles of an arbitrary form by spherical centers of scattering of some effective size, as frequently is done. "In conclusion, the authors express deep appreciation to Ye. O. Fedorova for use of the apparatus used in the investigations, advice and discussion of the results." Orig. art. has: 8 formulas and 3 figures.

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000824510002-9

Card 2/3

ACCESSION NR: AT5011164

ASSOCIATION: Institut fiziki AN BSSR, Minsk (Physics Institute, AN BSSR)

SUBMITTED: 25Nov64

ENCL: 00

SUB CODE: ES, OP

NO REF SOV: 003

OTHER: 007

Card

3/3

L 29679-66 EWT(m)/EWP(e) WH
ACC NR: AP6012852

SOURCE CODE: UR/0358/66/004/004/0306/0312

AUTHOR: Prishivalko, A. P.; Burakov, V. S.; Zhukovskiy, V. V.; Kopanik, Ye. K.

ORG: none

TITLE: Investigation of losses in a resonator with non-parallel bases

SOURCE: Zhurnal prikladnoy spektroskopii, v. 4, no. 4, 1966, 306-312

TOPIC TAGS: neodymium glass, solid state laser, laser cavity, laser optics, laser
r and d, laser energy

ABSTRACT: In view of the fact that the radiation-power losses of a laser depend greatly on the adjustment of the resonator mirrors, the authors analyze in detail, both theoretically and experimentally, the dependence of the laser parameters on the angle between the mirrors. The theoretical analysis is made in the geometric-optics approximation and is based on a calculation of laser resonator losses published by B. I. Stepanov and V. P. Gribovskiy (UFN v. 82, 201, 1964). A formula is derived for the loss coefficient of the mode with the largest number of passages of the beam, and is used to calculate the loss coefficient of a neodymium-glass laser. The results of the calculation were checked experimentally for three samples of neodymium-glass with different diameters and different surface finishes,

UDC: 621.375.9

Card 1/2

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000824510002-

L 29679-66

ACC NR: AP6012852

using a measurement procedure described by the authors earlier (ZhPS v. 2, 504, 1965). This method is based on determining the internal losses of the laser from the characteristic rise time of the lasing action. Plots are presented of the relative loss coefficient and the relative emission power against the misalignment angle of the mirrors. The calculations show that the losses increase rapidly with increasing angle, and that the minimum angle at which the loss can be neglected is ~15.5", which is lower than that given in the published specification. The discrepancy is attributed to the presence of systematic inhomogeneities in the rods, causing deflection of the beams to one side. The authors thank Academician AN BSSR B. I. Stepanov for interest in the work and a discussion of the results. Orig. art. has: 4 figures and 10 formulas.

SUB CODE: 20/ SUBM DATE: 06Sep65/ ORIG REF: 012/ OTH REF: 001

Card 2/2 CC

PRISHIVALKO, A.P. [Pryshyvalko, A.P.]; KOPANIK, Ye.K. [Kapanik, A.K.]

Calculating the luminescence in a resonator with outer mirrors
in the case of disadjustment. Vestnik AN BSSR. Ser. fiz.-mat.
nav. no. 2:65-70 '65. (MIRA 1961)

PRISHIVALKO, A.P.; KOPANIK, Ye.K.

Effect of the adjustment of resonator mirrors on the radiation
parameters. Dokl. AN BSSR 9 no.10:654-658 0 '65.

(MIRA 18:12)

1. Institut fiziki AN BSSR. Submitted January 30, 1965.

KOPANITSA, A.

Organomineral fertilizer mixtures increase the yield of early potatoes, Nauka i pered. op. v sel'khoz. 8 no.4:23 Ap '58.
(MIRA 11:5)

1. Zaveduyushchiy otdelom agrotekhniki Kiyevskoy ovoshchekartofel'noy opytnoy stantsii.

(Potatoes)

(Fertilizers and manures)

KOPANITS/A, A.M.

Fertilizers for potatoes in dark-gray podzolized soils. Agro-
biologiya no.1:41-45 Ja-F '64 (MIRA 17:8)

1. Kiyevskaya ovoshche-kartofel'naya opytnaya stantsiya.

KOPANITSA, A.M.

Effect of organomineral fertilizers on vegetable and potato yields.
Agrobiologiya no.1:99-102 Ja-F '60. (MIRA 13:5)

1. Kiyevskaya ovoshche-kartofel'naya stantsiya.
(Vegetables--Fertilizers and manures)
(Potatoes--Fertilizers and manures)

ISSN 0013-788X/78P(1)/RWP(b) LIT(c)/APWL/RAEM(+)/SSP ID

1978, 11/11/78

11/11/78/1101/1103

1. N. A. Kozlov, D. I. Trushin, V.

2. Determination of microelements in soil

3. Laboratoriya, v. 30, no. 10, 1978, 1101-1103

13

4. Indium, cadmium, polarographic analysis, extraction/ TTNA

ABSTRACT: The authors developed a method of finding copper, lead, cadmium, tellurium, bismuth, indium and thallium in soil. Separation of these elements by means of hydroxybenzoic acid was proposed to simplify earlier polarographic means of determining Cu, Pb, Cd and Tl (I. I. Anisimova and L. I. Istin, Zh. anal. khim., 1976, 25, 1, 10, M. 1976). The reagent TTNA (2,4,6-trinitrophenol - N, N, N', N'-tetrahydroxybenzoic acid) was combined with hydroxybenzoic acid in a mixture as the principal extractive reagent. Methods are outlined by which elements and groupings of extraction can be effected, depending upon composition. Several tests were run to verify the accuracy of using the method. Known quantities of indium, zinc, iron, cobalt, magnesium, manganese, copper, lead, cadmium and thallium were mixed together, and, after

Abstract

...taken place, the extracted quantities were compared with the previous
... The analysis proved quite accurate and required less time than
... A table of results and a detailed description of the analytical
... Orig. art. has: 1 formula and 1 table.

1. Polyanalificheskii institut, Akademii nauk ChSSR Praga (Polarograph-
2. Academy of Sciences, Czechoslovakian SSR)

ENCL: 00

1. 00

NO REF SOV: 003

OTHER: 003

KOPANITSA, N.I., agronom.

Highly oleaginous variety of sunflower in the raw materials zone
of the Poltava Oil and Fat Combine. Masl.-shir.prom. 19 no.5:6-7
'54. (MLRA 7:9)

1. Poltavskiy masloshirkombinat.
(Poltava Province--Sunflowers) (Sunflowers--Poltava Province)

MIKHAL'CHENKO, V.; KOPANITSA, Ya.; MOLCHANOV, V.

Striving for technological progress. Mast. ugl. 8 no. 12:13-15
D '59. (MIRA 13:4)

1. Predsedatel' Stalinskogo gorkoma profsoyuzov rabochikh ugol'-
noy promyshlennosti (for Mikhail'chenko). 2. Predsedatel' Tul'-
skogo obkoma profsoyuzov rabochikh ugol'noy promyshlennosti (for
Kopanitsa). 3. Zaveduyushchiy otdelom truda i zarabotnoy platy
Tul'skogo obkoma profsoyuzov rabochikh ugol'noy promyshlennosti
(for Molchanov). (Coal mines and mining) (Trade unions)

BOCHAROV, F.; DOBRA, A.; ZAYTSEV, N.; KALUTSKIKH, N.; KOMOGORTSEV, N.;
KOPANITSA, Ya.; MIKHAYLENKO, I.; PLIKHIN, P.; PODZHAROV, P.;
RUZOV, M.; SEMENOV, N.; STAKHANOV, A.; USKOV, A.

Foma Evgen'evich Tiurin; an obituary. Mast. ugl. 7 no. 11:32 N '58.
(MIRA 11:12)

(Tiurin, Foma Evgen'evich, 1898-1958)

KOPANITSA, Ya.

Unforgettable encounters. Sov.shakht. 11 no.1:44 Ja '62.
(MIRA 14:12)

1. Predsedatel' Tul'skogo oblastnogo komiteta profsoyuza.
(Russia--Relation (General) with Hungary)
(Hungary--Relation (General) with Russia)

KOPANJEC, M.

Examples of calculation of surface ventilators for a hard coal colliery with computations for a: (a loss of air through protecting walls (of thickness less than 10m.) b) loss of depression because of sudden turns and changes in the cross sections of galleries and loss of depression because of formation of whirlwinds originating in passing of air masses through obstacles in pits. p. 11 65. TEHNKA (Savaz inženjera i tehnicara Jugoslavije) Beograd. Vol. 11, no. 8, 1956/

SOURCE: East European Accession List (EEAL),
Library of Congress, Vol. 5, no. 11, Nov. 1956

KOPANOV, Mikhail Alekseyevich; KASHIRIN, Vasilii Filosofovich;
VERZHBINSKAYA, I.I., inzh., red.; FREGER, D.P., tekhn.red.

[Finish polishing using wheels with graphite filler] Chistovoe
shlifovanie krugami s grafitovym napolnitelem. Leningrad, 1956.
6 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy.
Informatsionno-tekhnicheskii listok, no.40: Mekhanicheskai
obrabotka metallov) (MIRA 10:12)

(Grinding and polishing)

KOPANOV, M. A.

BELOV, V.G., inzhener; KOPANOV, M.A., tekhnik.

How to check working roll surfaces on cold rolling mills. Metallurg
no.6:30-31 Jo '56. (MIRA 9:9)

1. Rukeyditel' prekatnoy gruppy TsZL (for Belev). 2. Nachal'nik uchastka
shlifovki valkov (for Kopanov). 3. Leningradskiy staleprekatnyy i preve-
lechno-kanatnyy zavod imeni Molotova.
(Rolls (Iron mills))

KOMENDANTOV, G.L.; KOPANOV, V.I.

Motion sickness as a problem of space medicine. Probl.kosm.
biol. 2:80-92 '62. (MIRA 16:4)
(MOTION SICKNESS) (SPACE MEDICINE)

KOPANS, G.I.

Installing an auxiliary telfer on the K2K-20/3 t. grab gantry crane. Stroi. ind., stroi. mash. i mekh. no.1:62-66 '62.

(MIRA 17:9)

1. Moskovskiy zavod zhelezobetonnykh izdeliy i konstruktsiy Moskovskogo tresta po stroitel'stvu i montazhu teplovykh elektrostantsiy.

KOPANSKA W.
KOPANSKA, W.

God made no use of the opportunity; a book review.

p. 18 (Zolnierz Polski) No. 26, Nove. 1957, Warszawa, Poland

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

ACCESSION NR: AR3000205

S/0081/63/000/006/0136/0136

SOURCE: RZh. Khimiya, Abs. 6G139

AUTHOR: Lyalikov, Yu. S.; Kopanskaya, L. S.

TITLE: Analysis of microsamples of indium-antimony-tellurium base semiconductor alloys

CITED SOURCE: Izv. AN MoldSSR, no. 12(90), 1961, 47-55

TOPIC TAGS: microsamples, indium-antimony-tellurium, semiconductor alloys

TRANSLATION: A microanalytical procedure has been developed for binary and ternary In-Sb-Te semiconductor alloys (sample of less than or equal to 30 mg). In sup 3+ determined complexometrically, Sb sup 3+ by bromide-bromate titration, Te sup 4+ iodometrically. Sample of about 30 mg is fused in microcrucible with 150 - 300 mg K-bisulfate and the melt is leached by heating with 3 ml mixed acid (25 ml sulfuric acid + 45 ml HCl + 180 ml water). The resultant solution is transferred with the use

Card 1/3

ACCESSION NR: AR3000205

added 3 ml HCl (1:1), excess of KI, diluted with water to 20 ml and titrated with solution of Na-thiosulfate. Ablank titration is carried out concurrently. Error of determination of Sb less than 4.7%; of Te, less than 6.1%. The method is suitable for analysis of films of semiconductor materials (to remove the film from the glass it is treated with molten K-bisulfate and weight of sample is determined from decrease in weight of glass), and of microsamples obtained by drilling from different phases of semiconductor materials. N. Chudinova

DATE ACQ: 16May63

ENCL: 00

SUB CODE: 00

Card 3/3

S/137/62/000/012/085/085
A006/A101

AUTHORS: Lyalikov, Yu. S., Kopanskaya, L. S., Safroкова, N. N.

TITLE: Chemical and physico-chemical methods for determining indium, antimony, and tellurium in semiconductor alloys

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1962, 19
abstract 12K118 (In collection: "Fizika", Leningrad, 1962,
26 - 30)

TEXT: The authors developed macro- and microchemical methods of determining In, Sb and Te, without separating same, in semiconductor alloys. The mean error does not exceed $\pm 0.5\%$. For In determination, 5 ml 10% solution of Seignette's salt, 10 - 15 ml buffer mixture (pH 8 - 10) and eriochrome black tracer, are added to the solution under investigation. The mixture is heated to the boiling point and titrated with trilon B until it turns blue. To determine Sb, 5 - 10 ml HCL (1:4) and one drop of methyl red tracer are added to the aliquot portion of the solution, which is titrated in 0.1 n. KBrO_3 solution until it turns yellow. To determine Te, 1 - 2 g KI is added to the aliquot portion of the

Card 1/2

KOPANSKAYA, I.S.; LYALIKOV, Yu.S.

Photocolorimetric analysis of the system indium - antimony - tellurium.
Izv. AN Mold. SSR no.10:31-37 '62. (MIRA 17:12)

L 32208-65 EWT(1)/EWT(m)/T/EWP(t)/EEC(b)-2/EWP(b) Pi-4 LJP(c) REM/CG/JD/US

A. NR: AT5-05-14

Approved, L. S.

alloys based on indium-antimony-tellurium 27 2

SOURCE: Nauchnaya konferentsiya molodykh uchenykh Moldavii, 3d. Trudy, no. 1: Prirodno-tekhnicheskiye nauki (Natural and technical sciences). Kishinev, Moldavskaya PRes, 1964. 23

semiconductor alloy, antimony alloy, tellurium alloy, quantitative analysis

The polarographic method for the determination of In, Sb, and Te in the form of a milligram sample of the alloy was compared to the results of weight% in InSb and TeSb alloys. The results in the form of InSb and TeSb are shown in Table I. The average error of the cathode (period = 2 sec.), and a solid phase mercury anode, in a solution of 0.1M HCl. The results agreed within 0.7% with the known composition of the samples.

Card 1/2

L 32208-65

ACCESSION NR: AT5005414

0

ASSOCIATION: None

REF: 00000000

ENCL: 00

SER CODE: OP, 88

REF: 000

OTHER: 000

000 272

LYALIKOV, Yu.S.; KOPANSKAYA, L.S.

Rapid method of determining indium, antimony, and tellurium
in semiconductor alloys by means of an alternating current
polarograph. Ukr. khim. zhur. 30 no.1:91-95 '64.

(MIRA 17:6)

1. Institut khimii AN Moldavskoy SSR.

L 24653-65 EPR/EWT(m)/EWP(b)/EWP(t) Ps-4 IJP(c) REW/JD
 ACCESSION NR: AP5004704 6/0030/64/000/009/0075/0078

AUTHOR: Pyelikov, Yu. S. (Corresponding member AN MolSSR); Radutsan, S. I.
 (Candidate of physico-mathematical sciences); Kopanskaya, L. S.; Molodtsov, I. P.

TITLE: Synthesis and chemical analysis of complex phase semiconductors

SOURCE: AN SSSR. Vestnik, no. 9, 1964, 75-78

TOPIC TAGS: indium, antimony, tellurium, selenium, aluminum, semiconductivity,
 chemical compound, analytic chemistry

Abstract: The synthesis of complex semiconductor systems, and their chemical and phase composition, have been investigated at the Institute of Physics and Mathematics and the Institute of Chemistry of the Moldavian Academy of Sciences. The results of investigations of systems of the $A^{III}B^{V}C^{VI}$ type are reported. In the indium-antimony-tellurium system, a new phase, $InSbTe$, with a NaCl-type lattice was detected and separated by the zone-levelling method. A large region of complete solid solubility, with a zinc blende-type structure, was also detected in $(InSb)_x - (InTe)_{1-x}$ compositions for $x < 0.35$. The existence of monovalent indium atoms was assumed in both structural

Card 1/3

L 24653-65

ACCESSION NR: AP5004704

types. The formation of vacancies in either cationic or anionic sublattices in solid solutions is the most likely mechanism of crystallization.

Large solid-solubility regions near the $A^{III}B^V$ component were also observed in the indium-arsenic-tellurium system (in the 0—50 mol % InTe range), and in the indium-arsenic-selenium and aluminum-antimony-tellurium systems. Recently, the possibility of dissolving 10 at% tellurium in InAs was discovered. The mechanism of solid dissolution of sixth-group elements in $A^{III}B^V$ compounds is explained. An attempt to synthesize Ga_4SbTe_3 , In_4AsTe_3 , or In_3SbSe_3 produced only complex mixtures of binary compounds and elements. Formation of large complete solid-solubility regions by heterovalent substitution is also considered possible in other ternary or more complex systems, near compounds of the $A^{II}B^{VI}$ type and in ternary diamond-type structures.

Chemical, microchemical, and physicochemical analytical methods were developed for determination of components in the indium-antimony-tellurium and gallium-phosphorus-sulfur systems. The pulse polarographic method is considered especially convenient for quantitative chemical analysis of thin semiconductor films deposited on a glass substrate by the Vekshinski method.

Card 2/3

L 24653-65

ACCESSION NR: AP5004704

2

A microboring machine with a FMT-3 microhardness gauge, and the anodic-dissolution method, were used for mechanical and electrochemical phase separation to determine the chemical composition of each phase in the indium-antimony-tellurium and In-InTe systems, respectively. Phase separation in the Ga-GaP and Ga_2S_3 -GaP systems was achieved by selective dissolution in hydrochloric acid.

ASSOCIATION: Institut fiziki i matematiki Akademii nauk Moldavskoy SSR (Institute of Physics and Mathematics, Academy of Sciences, MolSSR); Institut khimii Akademii nauk Moldavskoy SSR (Institute of Chemistry, Academy of Sciences, MolSSR)

SUBMITTED: 00

ENCL: 00

SUF CODE: SS, GC

NO REF SOV: 000

OTHER: 000

FSB v. 1, no. 1

Card 3/3

L 27911-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD
ACCESSION NR: AP4011978 S/0073/64/030/001/0091/0095

AUTHORS: Lyalikov, Yu. S.; Kopanskaya, L. S.

TITLE: A fast method for determining In^{3+} , Sb^{3+} and Te^{2-} in semiconductor alloys on an alternating current polarograph

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 30, no. 1, 1964, 91-95

TOPIC TAGS: In Sb Te system, pulse polarograph, a c polarograph, semiconductor alloy, thin film, indium, antimony, tellurium

ABSTRACT: A pulse polarographic method is developed for the analytical control of the synthesis of new semiconductors with given characteristics. Indium, antimony and tellurium can be determined in quantities in the order of 10^{-6} mole/liter of IN HCl electrolyte in In-Sb thin layers or in InSb-InTe semiconductor alloys. Preliminary separation of tellurium from indium is required only if the Te/In ratio is smaller than 1/100. This method has a high sensitivity and resolution power as well as some other advantages in comparison to other methods for defining the system In-Sb-Te. An a c polarograph of type KAP-225u. was used in this study. All three elements can be polarographed in one solution without the necessity

Card 1/2

L 27911-65

ACCESSION NR: AP4011978

of first removing the oxygen. Orig. art. has: 3 figures and 4 tables

ASSOCIATION: Institut khimii AN MSSR (Institute of Chemistry, AN
MSSR)

SUBMITTED: 07Jan63

ENCL: 00

SUB CODE: SS, op

NR REF SOV: 013

OTHER: 000

2/2

Card

L 6695-65 EWT(m)/EWP(q)/EWP(b) RAEM(t) RDW/JD/MLK

ACCESSION NR: AT4044567

S/0000/64/000/000/0134/0142

48
47

AUTHOR: Lyalikov, Yu. S.; Kopanskaya, L. S.; Molodyan, I. P.; Radutsan, S. I.

(Candidate of physico-mathematical sciences)

TITLE: Microchemical phase analysis of some semiconductor alloys of the system

$\text{In} - \text{Sb} - \text{Te}$

SOURCE: AN MolSSR. Institut fiziki i matematiki. Issledovaniya po poluprovodnikam; novyye poluprovodnikovyye materialy* (Semiconductor research; new semiconductor materials). Kishinev, Gos. Izd-vo Kartya Moldovenyaske, 1964, 134-142

TOPIC TAGS: phase analysis, microchemical phase analysis, semiconductor alloy, In - Sb - Te alloy, potentiometric titration, x-ray structural analysis, microhardness, microstructure

ABSTRACT: Microanalysis of the phase composition of In-Sb-Te alloys was carried out by potentiometric titration methods; antimony, tellurium, and indium were determined using methods previously described. Micro-samples of the different phases of this system were obtained with a drilling attachment to a microhardness meter base, using drills 0.1 mm in diameter. The phase samples obtained in this manner were not contaminated by other phases provided the drilling was not deeper than the phase diameter of 0.2 mm. A comparison of the single phase alloy In_4SbTe_3

Card

1/2

L 6695-65

ACCESSION NR: AT4044567

with the ternary compound In_4SbTe_3 showed that the error of element determination did not exceed 2% (abs.). Molar calculation by chemical analysis confirmed the alloy composition. The three-phase alloy $3\text{In}_3\text{Sb}_3 \cdot \text{In}_2\text{Te}_3$ was then investigated by this method. Only the gray and light gray phases could be analyzed microchemically. Results indicated that the gray phase contained all three elements and represented the solid solution of In Sb, while the light gray phase revealed only indium and tellurium. It was shown that this alloy did not contain its original compounds InSb and In_2Te_3 . Ingots obtained after zone leveling of the alloy $\text{In}_3\text{Sb}_3 \cdot \text{In}_2\text{Te}_3$ were also analyzed. The beginning, middle and end of the ingot were checked for phases, microhardness, lattice type and lattice constant. Microchemical analysis showed that the ratio of the elements in the beginning of the ingot was close to that in the ternary compound In_4SbTe_3 . Analysis of the middle showed a decrease in indium and an increase in antimony. The final section consisted of phases corresponding to InSb and also In_4SbTe_3 . These data agree with micro and x-ray structural analyses. Orig. art. has: 5 figures and 3 tables.

ASSOCIATION: Institut fiziki i matematiki AN MolSSR (Institute of Physics and Mathematics, AN Mol.SSR)

SUBMITTED: 13Dec63

ENCL: 00

SUB CODE: MM

Card

2/2 NO REF SOV: 008

OTHER: 000

L 32196-66 EWT(m)/ETC(f)/T/ENP(t)/ETI IJP(c) RDW/JD
 ACC NR: AP6012909 SOURCE CODE: UR/0075/66/021/004/0516/0517

AUTHOR: Kopanskaya, L. S.

ORG: none

TITLE: Conference on analytical chemistry of semiconductors

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 4, 1966, 516-517

TOPIC TAGS: chemical conference, analytic chemistry, semiconducting material, trace analysis, polarographic analysis, spectrophotometric analysis, spectrographic analysis, spectroscopy

ABSTRACT: A Conference on Analytical Chemistry of Semiconductors was held 11-15 November 1965 at the Academy of Sciences MoldSSR in Kishinev. About 200

participants discussed the problems of sensitivity of newly developed analytical methods in view of purity requirements (10^{-6} — 10^{-8} % impurity) for semiconductor materials, application of the analytical methods for production control of semiconductor materials, preparation of pure reagents with controlled impurity content, chemical analysis of complex semiconductor systems, etc.

Basic trends of the analytical chemistry of multicomponent systems were outlined by Yu. S. Lyalikov, N. A. Goryunova, S. I. Radautsan, and L. S.

Card 1/4

L 32196-86

ACC NR: AP6012909

Kopanskaya (AS MoldSSR. and Leningrad Physicotechnical Institute, AS USSR) who emphasized the importance of determining stoichiometric deviations of the order of $10^{-3}\%$.

23

M. S. Chupakhin, and Yu. V. Yakovlov, both from the Moscow Institute of Geochemistry and Analytical Chemistry, AS USSR, reported on determination of oxygen and nitrogen in high purity hydrogen and argon, and on activation analysis of semiconductors, respectively.

Most of the papers dealt with various polarographic techniques.

A. G. Stromberg and co-workers (Tomsk Polytechnic Institute) presented a series of papers on amalgam polarography with accumulation, which presently makes possible determination of 10^{-7} — $10^{-8}\%$ impurity, and offers distinct possibility of increasing sensitivity to 10^{-10} — $10^{-11}\%$.

B. Ya. Kaplan, G. N. Revyakina, Kh. S. Rezakova, and O. A. Shirayeva (State Scientific Research and Planning Institute of the Rare Metals Industry) used pulse polarographic technique to increase sensitivity of tellurium determination in gallium phosphide.

I. A. Tserkovnitskaya and V. N. Yepimakhov (Leningrad State University) used oscillographic polarography in different base electrolytes to determine simultaneously selenium and germanium.

Card 2/4

L 32196-66

ACC NR: AP6012909

A. M. Surmiy, A. M. Arishkevich, and Yu. I. Usatenko (Dnepropetrovsk Institute of Chemical Technology) indicated the possibility of amperometric determination of tellurium and antimony, or selenium and antimony in various semiconductor materials. 21

25

A series of papers was presented on [spectro] photometric determination of impurities in high purity elements or $A^{III}B^V$ and $A^{II}B^{IV}$ [sic] compound semiconductors. In this series, N. B. Lebed, R. P. Pantaler, and L. N. Semenova (All-Union Scientific Research Institute of Single Crystals) gave a method of determination of different selenium forms in cadmium selenide.

L. B. Kristaleva, N. A. Shor, and P. V. Kristalev (Perm' Polytechnic Institute) reported the determination of arsenic as a molybdenum thiocyanate complex in red phosphorus. V. G. Goryushkina and Ye. Ya. Biryukova (State Scientific Research and Planning Institute of the Rare Metals Industry) presented photometric methods for indium gallium and arsenic.

In the series on spectroscopic analysis of semiconductor materials, great interest was shown in the paper by A. V. Karyakin, M. V. Akhmanova, and V. A. Kaygorodov (Institute of Geochemistry and Analytical Chemistry, AS USSR) on determination of aluminum, boron, and phosphorus deposits in SiC with the help of a laser. M. A. Notkina and S. M. Solodovnik (State Scientific Research and Planning Institute of the Rare Metals Industry) showed that sensitivity of impurity determination in $A^{III}B^V$ compounds can

Card 3/4

LS
Card 4/4

KOPANSKI, F.

COUNTRY : Poland H-13
 CATEGORY :
 ABS. JOUR. : RZKhim., No. 21 1959, No. 75612
 AUTHOR : Kopanski, F.
 ADDR. : Not given
 TITLE : The Production of Building Materials from Fuel
 Wastes
 ORIG. PUB. : Energetyka (Poland), 12, No 1, 1-5 (1958)
 ABSTRACT : The production of local building materials (LBM)
 from steam-heat and electric power station fuel
 wastes (slag, fly ash) in Southern Poland is
 described. Among the LBM produced are porous and
 gaseous silicate and blast furnace slag concrete
 blocks and blast furnace slag-ash-concrete bricks,
 used mainly in the construction of housing units
 and auxiliary buildings. The mortars used in the
 production of LBM are burnt CaO, ground gypsum,
 ground blast furnace slag; Al powder is used as

CARD: 1/3

COUNTRY : Poland
CATEGORY :

H-13

ABS. JOUR. : RZKhim., No. 21 1959, No.

75612

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : pore-[gas-] forming agent. Porous and gaseous blocks are produced from mixtures of ash, ground CaO, gypsum, Al, and water, mixed to the consistency of liquid cream, and are poured into forms; when the mass has set, it is cut into blocks of desired size and the latter are subjected to the action of saturated steam, followed by additional storage for about 1 month. Blast furnace slag-ash-concrete bricks are formed in 'carousel' presses and taken to autoclaves. Slag-concrete

CARD: 2/3

197

COUNTRY	:	Poland	H-13
CATEGORY	:		
ABS. JOUR.	:	RZKhim., No. 21 1959, No.	75612
AUTFOR	:		
INSTR.	:		
TITLE	:		
ORIG. PUB.	:		
ABSTRACT	:	<p>blocks are produced from mixtures of granulated boiler slag, ground CaO, and ground blast furnace slag of normal poured concrete consistency; the blocks are shaped by machine and kept 10-14 days in steam chambers or stored under natural conditions for 30 days. The production of type 150 slag portland cement from blast furnace slag has been organized at the rate of about 200 tons per month; in addition, up to 10,000 tons of clay cement are produced per yr. The Polish Govern-</p>	
CARD:		3/4	

COUNTRY : Poland
CATEGORY : H-13
ABR. JOUR. : RZKhim., No. 21 1959, No. 75612
AUTHOR :
INST. :
TITLE :
ORIG. PUB. :
ABSTRACT : ment has drawn up a broad plan for the production
of LBM from fuel wastes: of the total planned
1965 production of 10 billion units (brick basis),
only 4 billion units will be produced in the form
of bricks from clay, the remaining 6 billion units
being made from wastes.
S. Glebov

CARD: 4/4

198

KOPANSKI, R.

Possibilities of the introduction of silkworm breeding in collective farms. p. 74.
(NOWE ROLNICTWO. Vol. 2, no. 10, Oct. 1953)

SO: Monthly List of East European Accessions, L.C., Vol. 3, No. 4, April, 1954

KOPANSKIY, Ya. M.

Dissertation defended for the degree of Candidate of Historical Sciences in the
Institute of History

"Upsurge of the Working Class Movement in Bessarabia During the Years of the
World Economic Crisis (1929-1933)."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

KOPANTSEV, M.N.; OVCHINNIKOV, B.A.; BABAYEV, Ye.V.; BABUSHKINA, M.D.

System of purification and cooling of sulfur dioxide with the use of bubble tower equipment. Bum.prom. 34 no.2:11-15 F '59.
(MIRA 12:4)

1. Upravleniye TsBP Kaliningradskogo sovnarkhoza (for Kopantsev).
2. Vtoroy Kaliningradskiy kombinat (for Ovchinnikov).
3. Moskovskiy filial TSentral'nogo nauchno-issledovatel'skogo instituta tsellyuloznoy i bumazhnoy promyshlennosti (for Babayev, Babushkina).

(Sulfur dioxide) (Scrubber (Chemical technology))

1ST AND 2ND EDITIONS																										3RD AND 4TH EDITIONS																									
PRIVILEGES AND PROPERTIES INDEX																										PRIVILEGES AND PROPERTIES INDEX																									
<p>Regeneration (of sulfurous acid and relief liquor) in sulfite pulping. M. Kozmutsy. <i>Tsentral. Nauch.-Issledovatel. Inst. Khimichesk. Prom. Material</i> 1956, No. 4, 116-65. Theoretical and exper. studies of the problems of recovery of SO_2 and blow-off acid in connection with the production of tower acid and sulfite pulping led to the following conclusions: the quantity of recovered SO_2 depends directly on the content of free SO_2 in the cooking acid. For the cooking kettles of the Syaskil mill it is detd. by the formula: percentage SO_2 = 1710 (free SO_2 - 1). The percentage of SO_2 recovery is detd. by the compn. of the cooking acid and the formula: recovered SO_2 = 90 X free SO_2 - 1/total SO_2. This formula with correction for the work of recovery installation can be applied to the majority of Soviet pulp mills. The correction for the recovery plant of the Syaskil mill is 4.7% because of the incomplete absorption of SO_2 in the Stebbins tower. The formula makes possible comparison of the efficiencies of various recovery installations with adequate means of calcn. and control of the production of tower and cooking acids. Forced circulation increases somewhat the percentage of SO_2 recovery in comparison with the usual cooking. Energetic and deep reliefs result in the ppn. of $Ca(HSO_3)_2$ and a pulp with a higher ash content. Extended steeping and slowly rising temp. increase the percentage of SO_2 recovery. With better packing of wood chips in the digesters the percentage of regeneration decreases. The percentage of recovery of liquor for the same installation may fluctuate within wide limits. The quantity of recovered liquor depends on (1) the extent of filling of the digesters with acid, (2) the moisture content of wood chips and (3) the period of relief. The strength of the relief liquor increases with the increased contents of free SO_2 in the cooking acid. With better packing of wood chips in the digesters the quantity of relief liquor decreases. The relief liquors contain 0.3% CaO. In all blow-offs, except the final one, the relief liquid consists chiefly of the liquor mechanically carried over, contg. 3-7% of the steam</p>																																																			

CA

23

The work of Byas'kii pulp mill. M. M. Kuznetsov.
Russkaya Prom. 10, No. 6, 13-21(1939).—A crit.
 discussion of all the phases of sulfite pulping and the
 proposed methods of improved procedures. C. Blanc

ASME-ISA METALLURGICAL LITERATURE CLASSIFICATION
 1304 571811A

COMMON ELEMENTS										COMMON VARIANTS									
OPEN										CLOSED									
MATERIALS										MATERIALS									
<div style="position: relative; height: 150px;"> CA <div style="position: absolute; top: 10%; right: 10%;">23</div> <div style="position: absolute; top: 30%; left: 35%;"> <p>Elimination of drawbacks in a Kamir pulp-refining tower and new method of chlorinating pulp. <i>M. M. Kopantsev and I. V. Molodov. <u>Humashnaya Prom.</u> 21, No. 370, 24-31 (1946).</i> Improvements in cellulose refining and bleaching app. and methods introduced in some pulp plants in Finland are discussed. <i>M. Hosh</i></p> </div> </div>										<div style="position: relative; height: 150px;"> <div style="position: absolute; top: 30%; left: 35%;"> <p>Elimination of drawbacks in a Kamir pulp-refining tower and new method of chlorinating pulp. <i>M. M. Kopantsev and I. V. Molodov. <u>Humashnaya Prom.</u> 21, No. 370, 24-31 (1946).</i> Improvements in cellulose refining and bleaching app. and methods introduced in some pulp plants in Finland are discussed. <i>M. Hosh</i></p> </div> </div>									
ASB. SLA METALLURGICAL LITERATURE CLASSIFICATION										E-2									
SEARCHED										SERIALIZED									
INDEXED										FILED									

1ST AND 2ND PROPS										3RD AND 4TH PROPS									
PROCESSING AND PROPERTIES INDEX																			
<div style="position: absolute; top: 10px; left: 10px; font-size: 2em; font-weight: bold;">CA</div> <div style="position: absolute; top: 10px; right: 10px; font-size: 2em; font-weight: bold;">23</div> <div style="position: absolute; top: 350px; left: 350px; width: 600px; height: 250px;"> <p>Sulfur consumption in sulfite pulping M. M. Kozant, <i>rev. Pulp. Technol.</i> 22, No. 3, 6-10 (1947). A formula has been developed for S consumption in sulfite digestion: $S = 0.1 n [5 SO_{(total)} - 4.5 (SO_{(free)} - 1)] - 0.1 n [0.5 SO_{(total)} + 4.5 (1.14 CaO + 1)]$, where $S = \%$ S consumed per ton of air-dry cellulose; $n =$ cu. m. of acid used per ton of cellulose; $SO_{(total)} =$ total $\%$ SO_2 in cooking acid; $SO_{(free)} = \%$ free SO_2 in cooking acid; $CaO = \%$ CaO in cooking acid. The calcd. result using this formula is in close agreement with exptl. results obtained in actual mill operation. Actual figures for S consumption in cooking alone (83% of the total calcd. by the above formula) varied from 60 to 120 kg./ton. M. S.</p> </div>																			

										ASD-125 METALLURGICAL LITERATURE CLASSIFICATION																			
1ST DIVISION										2ND DIVISION																			
SUBDIVISION										SUBDIVISION																			
SECTION 02										SECTION 02																			
SUBSECTION 02										SUBSECTION 02																			
SUBSUBSECTION 02										SUBSUBSECTION 02																			

CA

Production of wood-fiber plates. M. M. Kopyntsev.
Dokl. Akad. Nauk SSSR, 1947, No. 4, 15-27 (1947).
Manufact. and characteristics of insulite, wallboard, and rauma
(Finnish product). 12 references. H. Z. Kamich

25

CA

Rational new method for recovery of sulfurous gases.
M. M. Kuznetsov. *Humash. Prom.* 22, No. 5, 10-20 (1967). A scheme is presented for the calcn. of cooking-acid coupon. In sulfite digestion and 2 alternate flow sheets are presented for S recovery from digester relief gases, to be used in conjunction with the limestone-tower method prepn. of the cooking liquor. A nomogram is presented for detn. of CaO and total SO₂ in cooking acid, based on analyses of tower acid and blow acid. M. S.

ASSOCIATED METALLURGICAL LITERATURE CLASSIFICATION

CA

23

Sulfur consumption in sulfate digestion M. M. Kopyantsky. *Russk. Prom.* 23, No. 2, 22-33 (1948); *Ch. C. A.* 42, 4749f, 6111g. -- Spruce chips were cooked with acid contg. 5.0% total SO_2 and 0.9% CaO (I) at chip:acid wt. ratios of 1:4, 1:5, and 1:6, acid contg. 5.0% total SO_2 and 0.6% CaO (II) at a chip:acid wt. ratio of 1:7.5, and acid contg. 11.0% total SO_2 and 0.9% CaO (III) at a chip:acid wt. ratio of 1:5. Actual S consumption ranged from 95% to 107% of S consumption calcd. by K.'s previously published formula for acid (I), from 74% to 77% for acid (II), and from 78% to 81% for acid (III).
Marshall Settle

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1948-1951

1948-1951

1948-1951

CA

The application of liquid sulfur dioxide in sulfate mills.
M. M. Kopylovskiy. *Tr. Vsesoyuzn. nauch.-issled. inst. khim. tekhn. i mashinostroen. (1951)*. - The use of liquid SO_2 (1) for fortifying sulfate cooking acid during the summer months is described. The transportation and storage of 1, methods of its use on the various points in the acid system, the effect of its use on the recovery system, and the results of its use on mill production are discussed. In one mill, the use of 0, 8.8, 15.1, and 18.1 kg. 1 per ton of pulp resulted in production indexes of 100, 107.8, 111.0, and 121.0, resp. In another mill, where the strength of the tower acid was 4% (0.99% CaO) and of the cooking acid 3.37% (1.0% CaO), the use of 35 kg. 1 per ton of pulp gave a cooking-acid strength of 4.3%, and the cooking time was reduced from 22 hrs. 35 min. to 11 hrs. 35 min.
John Lake Keays

1. KOPANTSEV, M. M.
2. USSR (600)
3. Wood Pulp Industry
4. Problem of the effect of running the solution from vessel to vessel during sulfate cooking on the extraction of sugars.
Bum.prom.27 No. 6 - 1952.

9. Monthly List of Russian Accessions, Library of Congress, February, 1953. Unclassified.

1. KOPANTSEV, M. M.
2. USSR (600)
3. Wood Pulp Industry
4. Use of deep runs of the liquor from boiler to boiler in sulfite cooking of pulp.
Bum.prom. 27 No. 11 - 1952.
9. Monthly List of Russian Accessions, Library of Congress, February, 1953. Unclassified.

KOPANTSEV, ENG. M. M. - NAGRODSKIY, I. A.

Paper Industry

Book which should not have been printed ("Technical and chemical control in pulp and paper production." B. P. Osanov. Reviewed by Eng. M. M. Kopantsev, I. A. Nagrodskiy),.. Bum. prom. 28 no. 1, 1953

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

KOPANTSEV, M.M.

increasing the service life of the blades of bark-remover knives.
Bum.prom. 29 no.7:25-26 J1 '54. (MLRA 7:8)

1. Glavnyy inzhener vtorogo Kaliningradskogo tsellyulosno-bumash-
nogo kombinata.
(Wood-pulp industry)

KOPANTSEV, M.M.

Water as one of the means of regulating the process of pyrite
burning; Bum.prom.29 no.9:18-22 S '54. (MLRA 7:11)

1. Glavnyy inzhener vtorogo Kaliningradskogo tsellyulosno-
bumazhnogo kombinata.
(Pyrites)